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# REMARKS

BY

DR. B. A. GOULD.

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# REMARKS.

Ladies and Gentlemen:

The duty has been imposed upon me, by those whose wishes are sufficient commands, and whom it would be more than ingratitude to refuse, of presenting to you a simple statement of the efforts which have been recently made toward the establishment of the Observatory of Albany; a temple of science which is not only, as we hope, to render the name of this munificent and hospitable city as classic as it is dear to all our hearts, but at the same time to enshrine the memory of a noble name, and of an affection far more worthily expressed than that of an Artemisia. History tells of Mausolus, a monarch remarkable for his exalted character and his personal beauty. His stricken widow, after falling for a while into the deepest affliction, rose finally above her sorrow, and reared that splendid monument known as a Wonder of the world. She gave to it her husband's name, and even now, when thousands of years have passed away, the Mausoleum is a word familiar to your ears. But a more than Artemisia is here—a more than Mausoleum crowns yon verdant summit, from within whose walls shall go out light and truth unto the nations. Such deeds as these demand no common tongue to do them honor—and you know whose tongue is enlisted in their praise. Nor will I forget it. Be mine the simple task to tell the simple tale, and let the eloquence of truth be its simple ornament.

The aspirations of our countrymen for some high educational seminary in the land, that shall receive American youth where the colleges leave them, and afford the same facilities for the highest culture in specialities that the colleges offer for the general acquisition of information, refinement and taste;—and which shall supply to our own young men the combined sources of knowledge, which they have hitherto been compelled to seek on the other side of the ocean, have within a few years found expression in various places; but nowhere has the effort to bring the aspirations to fulfilment been so vigorous as in this city of Albany. During the summer of 1852 several public meetings were held here in reference to this great end, and perhaps it is not too much to believe that, had not the extraordinary political excitement of the succeeding winter suddenly thwarted the plans of the friends of a national university, the legislature of this State, assembled in yonder capitol, would have enacted into a law that bill, which they had already discussed, and which would have given to this capital city a high pre-eminence as the western home of science, letters and art. But the effort has not been fruitless, and as a part of that great scheme which may, let us hope, yet be carried into effectual reality, it was resolved to found an Astronomical Observatory; and the appeals to the liberality of individuals met with a ready and cheerful response. Three gentlemen, Messrs. Thomas W. Olcott, Wm. H. De Witt, and Ezra P. Prentice, immediately contributed $1,000 each, and Mr. De Witt subsebuently increased his subscription to $1,500. Genl. Stephen Van Rensselaer contributed several acres of valuable land as an appropriate site for the building. After this, Mrs. Blandina Dudley—a name now known to you all as synonymous with munificence and patriotism, subscribed the sum of $12,000 in token of her respect for the memory of a devoted husband; and in the act of incorporation, the Institution received by vote of the Trustees, as a testimony of their gratitude, the name of Dudley Observatory. Mrs. Dudley mentions it as among her most pleasing reflections, that her distinguished, excellent and affectionate husband cherished during his lifetime a special interest in this department of science, and that no appropriation could be made by her more consonant with what his tastes and wishes would undoubtedly have been. The impulse thus given to the plan, prompted to still greater interest; and many more gentlemen came forward with contributions until the total sum of $25,000 was secured, with which to erect a building on a larger scale than had been originally contemplated. By the act of incorporation the government of the institution is vested in a Board of Trustees, of which Gen. Stephen Van Rensselaer is President; and in order that the building might be in all respects accordant with the present demands of astronomy, the plans were drawn by Messrs. Walter & Wilson, under the direction and supervision of Prof. Mitchel, of

Cincinnati, a gentleman who needs no encomium here. The erection of the building in conformity with these plans was intrusted to the supervision of Prof. George R. Perkins, then a resident of Albany, who gave to it his unremitting attention. The building is in the form of a cross, of 84 feet front by 72 in depth,—a tower with revolving cupola rising from the centre, for the reception of the heliometer, or an equatorial telescope, should one hereafter be obtained. The central portion is 28 feet square; the east and west rooms, which are for the meridian instruments, are each about 23 feet square, but large semi-cylindrical projections of 6 feet radius are now building, both north and south, for the reception and protection of collimator piers. The north wing, which is about 40 feet square, contains a room for the library, together with four small rooms, two of which were intended for the use of computers. The cylindrical tower is 22 feet in diameter, revolving upon iron balls.

The foundations of this edifice were laid in the spring of 1853, the building completed within the year, and the charge of the whole enterprise entrusted to Prof. Mitchel. But circumstances rendering him unable to take charge of the

Observatory at that time, the building remained for two or three years unoccupied. Still the seed already planted had swelled, germinated, and taken deep root. It has been said that still waters run deepest; and while the Observatory building sat placidly upon the beautiful Van Rensselaer hill, like an uncrowned queen, the hearts of the citizens of Albany were expanding to the reception of that great affection for learning, science and patriotic effort, which characterizes them before the world to-day. The Law-School of the University of Albany was organized, and the Medical School entered upon its new life;—each of these, like the Observatory, forming in name and nature, if not in organization, a part of what we trust may one day become the great National American University.

Thus stood affairs one year ago, at the Providence meeting of the American Association. And now I come to the mention of a name whose sympathetic influence calls up all the generous feelings of the heart, a name which I cannot lightly utter, for it belongs to a man whom to know is to love, and to mention is but to praise. It is his whose agency is evident in all good works; whose thoughtfulness is conspicuous in all kindly actions; his, to whom is in great part due the establishment of many a noble institution in this city of his adoption and his love, forming an imperishable monument of his public spirit; his, whose efforts were among the most untiring in behalf of the University, his, whose mild and gentle persuasiveness, whose modest, retiring, disinterested zeal conferred on this Association a priceless boon under the form of asking one, when he persuaded it to disregard all precedent by returning after the expiration of a single lustrum, and holding now for the second time its session in this great-hearted capital. There is no need of saying that this name is James H. Armsby. God bless him! for he is blessing God's earth, and the world is better that he lives in it.

Dr. Armsby came to Providence a year ago, bearing the invitation from Albany that the Association would hold the session of 1856 in this city. Prof. Peirce was about the same time communicating to astronomers the results of his investigations relative to the determination of the longitude by means of occultations of the Pleiades, and he dwelt upon the great need of fine and precise measurements of the relative positions of the numerous stars of this group. The Superintendent of the Coast Survey had approved this plan and adopted it, as essential in his work. This was enough for Dr. Armsby; he saw in it a means of usefulness for the Dudley Observatory, and on learning that a heliometer was the instrument most appropriate for the class of observations required, he guaranteed upon his own responsibility that Albany would provide one, although none yet existed within the United States. He immediately hastened to Newport to confer with that friend of all noble enterprises, the Hon. John V. L. Pruyn. On finding that Mr. Pruyn had left Newport, he returned to Albany, and after farther conference with Mr. Olcott, came back to Providence with a confirmation of his guarantee, provided that the Coast Survey would take for a while the direction and control of the Observatory for its observations. Within ten days several meetings of public-spirited citizens were held in Albany, which resulted in my departure for Europe, provided with both the authority and the means of obtaining several instruments of the first class, and proud not merely of being able thus to contribute a humble mite towards the great work, but of the tale which I might tell, and of Albany, a city of the western continent. A scientific council was appointed by the Trustees, boasting the great names of Bache, Peirce and Henry. Mrs. Dudley increased her claim to the gratitude of the Observatory and of all lovers of science, by offering $6,000, the estimated purchase-money for the heliometer, and a day or two after, in a beautiful letter to the trustees, she increased the donation to $8,000—or more if needed. Two other gentlemen, through Thomas W. Olcott, Esq., became responsible for a meridian-circle, to be provided without any limitation as to expense, and Prof. Bache empowered me to order for the Coast-Survey, a transit-instrument of the best possible construction which could be devised. The Hon. Erastus Corning of this city subscribed $1,000 for providing the Observatory with time, and Henry Q. Hawley, Esq., volunteered to supply the apparatus for making and distributing gas according to the new and admirable method of Mr. Aubin. This new and unexpected liberality was inspiring, electrifying. The occasion had no sooner arrived than the ideas and aspirations of Albany grew to meet it. It made one prouder, if possible, while standing on the eastern continent, to call himself an American. The meridian-circle and the transit-instrument were ordered in Berlin. They are of unsurpassed magnitude, and of a new construction, the chief points of which have already been presented to the physical section of the Association which has this day adjourned. And it was my high privilege on that occasion to become the vehicle of the public announcement, that the Trustees, at the instance of the Scientific Council, had given to that new and exquisitely beautiful meridian circle the honored name of OLCOTT, which is already engraved upon it in deep and ineffaceable characters, to endure so long as the instrument itself exists. Not that the name needed the chisel, but that the Trustees felt it due to themselves to find some outlet for their overflowing admiration and respect. These instruments are probably already on their way. The sidereal clock was ordered in Altona, and is of a construction still more peculiar than that of the meridian instruments. It will soon be here and be described. The clock for mean time has been made by our accomplished fellow-citizen, Mr. Farmer, of Boston. Its pendulum has no weights, and needs no winding.

Henceforth the visitors to the Observatory will find, on entering the door, a deep niche in front of them, in which will be placed the elegant bust of Charles E. Dudley, sculptured by an Albany artist, the inimitable Palmer, and dedicated by an affectionate widow to the memory of Dudley and the advancement of astronomy. On the right is the great marble dial, three feet square, which shows the Observatory time, beat by the beautiful electro-magnetic pendulum which is swinging on the left, and which is not only to supply this city with its time correct to the fraction of a second, but is to flash it along the electric wire till its little tick be heard upon the lakes and at the ocean, and in all the rail-road stations lying between—the stay of the navigator, the guardian of the traveler, the safeguard of human life, and the promoter of human welfare on land and sea. An elegantly engraved marble inscription below it commemorates the name of the donor.

A beautiful chronograph already completed by Mr. Farmer and constructed in conformity with his own ideas on a new and improved principle, is now in the Observatory, to be followed by at least two more. Dials in every room will telegraphically record the time indicated by the normal clock imbedded in the massive pier below; while the Corning clock sends out the corresponding mean or civil time, to the north, south, east and west. Of the scientific bearings of all this, I do not speak, for my duty at present is historical alone.

Of the heliometer nothing has as yet been told you. This is the most delicate, complicated and difficult of construction of all the implements of the astronomer. There seemed but one European artist to whom such a work should be intrusted; and the common voice of the astronomers of every nation pointed to the brothers Repsold of Hamburg, the builders of the magnificent heliometer of Oxford, by far the first of its class. Ladies and gentlemen, the voice of Europe directed with one accord to Repsold. Not so the voice of America. Knowing the splendid triumphs of German and French mechanic art, knowing the exalted reputation that most worthily adorns Repsold's name—the trustees of the Dudley Observatory have yet confided the construction of this exquisitely delicate instrument to our countryman, and the great Dudley Heliometer, (for which Mrs. Dudley, who had so munificently raised her $6000 to $8000, has now raised the $8000 to $14,500,) is to be built by our countryman Spencer, here in this city of Albany. Ladies and gentlemen, let me assure you, here in the presence of these five thousand witnesses, on this solemn occasion, with the full sense of the responsibility before the whole scientific world which the declaration entails, let me say to you, that the trustees of the Dudley Observatory will never regret it. We have been long indebted to Europe—it is time that Europe should be indebted to America. Mr. Spencer has traversed the European continent since May last, and examined the chief triumphs of instrumental art. He has met, like his countrymen who have preceded him, with a cordial welcome from the great hearts of men like Airy, Johnson, Challis, Argelander, Struve and Encke; and found the open hand of friendship extended to the new star in the terrestrial constellation. The hearts of the astronomers of the old world are beating with us to-day and now. Johnson, Argelander, Hansen, Struve, Peters, know the day and hour, and while we think of them and their cordial aid and fellowship with respectful affection, as we do now, they are thinking of us here, and sending us their unseen, but not unfelt, sympathies and congratulations.

Thus stands the Dudley Observatory to-day, the day of its inauguration. The enlargement of the building needs but a few weeks for its completion. By that time the meridian-instruments will have arrived, and the clocks will be sending their mystic signals to all the dials, even as the Corning clock now ticks above my head. The chronographic apparatus and the heliometer have been ordered, and the means provided for their construction.

Ladies and gentlemen, I shall be pardoned for so long detaining you from the eloquence which we all know to be in store from the golden-mouthed scholar, who has at so much sacrifice come hither to contribute the splendid offering of his oratory. Let me close with a single remark.

The implements are now at hand. But they must be used. Where are the observers, the computers, the books, the houses? Where is the Observatory to look for the means of publishing its results, when once attained? Ladies and gentlemen, the efforts made thus far, must be considered but the beginning—yet as the citizens of this state, and of this, its capital city, have never thus far failed to respond to every demand upon their liberality, as their ideas have always grown to meet the emergency, let us have faith! The eyes of the whole scientific world are upon this patriotic and noble effort. If my instincts lead me right, those eyes may yet be dazzled.